UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,428	06/24/2003	Bo Shen	200208570-1	4318

7590 05/25/2011

HEWLETT-PACKARD DEVELOPMENT COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
FINDLEY, CHRISTOPHER G	
ART UNIT	PAPER NUMBER
2482	
MAIL DATE	DELIVERY MODE
05/25/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BO SHEN

Appeal 2009-007707
Application No. 10/603,428[1]
Technology Center 2600

Before MARC S. HOFF, CARLA M. KRIVAK, and THOMAS S. HAHN, Administrative Patent Judges.

HOFF, Administrative Patent Judge.

DECISION ON APPEAL

---

[1] The real party in interest is Hewlett-Packard Development Company, L.P.

STATEMENT OF CASE

Appellant appeals under 35 U.S.C. § 134 from a Final Rejection of claims 1-27. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

Appellant's invention concerns methods and systems for servicing streaming media. The method includes performing a multi-stage service on the streaming media and caching an intermediate result from one of the stages of the multi-stage process. The intermediate result is selected according to the available processing and memory resources (Spec. 3).

Claim 1 is exemplary of the claims on appeal:

> 1. A method for servicing streaming media comprising:
> receiving said streaming media;
> determining an allocation of available processing and memory resources;
> performing a multi-stage service on said streaming media; and
> caching an intermediate result from one of the stages of said multi-stage process, said result selected according to said available procesing and memory resources.

The Examiner relies upon the following prior art in rejecting the claims on appeal:

Yoo	US 6,999,512 B2	Feb. 14, 2006
Apostolopoulos	US 6,404,814 B1	Jun. 11, 2002
Panusopone	US 6,647,061 B1	Nov. 11, 2003

Claims 1-27 stand rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter.

Claims 1-5, 9-14, and 19-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoo in view of Apostolopoulos.

Claims 6-8, 15-18, and 24-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoo in view of Apostolopoulos and Panusopone.

Throughout this decision, we make reference to the Appeal Brief ("App. Br." filed Apr. 30, 2008), the Reply Brief ("Reply Br." filed Oct. 20, 2008) and the Examiner's Answer ("Ans." mailed Aug. 20, 2008) for their respective details.

ISSUES

Regarding the § 101 rejection of claims 1-27, Appellant argues that the invention recited in the appealed claims qualifies as patent-eligible subject matter because the claims produce the useful, concrete and tangible result of "caching an intermediate result" (App. Br. 9). The Examiner contends that the claims do not recite a tangible result (Ans. 10); further, the Examiner concludes that claims 10-18 recite nonfunctional descriptive material because they do not recite a computer readable medium (Ans. 3, 10).

With respect to the § 103 rejections, Appellant argues, inter alia, that Apostolopoulos teaches neither caching an intermediate result from one of the stages of the multi-stage process (App. Br. 13), nor caching an intermediate result selected according to available processing and memory resources (Reply Br. 1).

Appellant's contentions present us with the following issues:

1. Is the claimed invention directed to a patent-ineligible abstract idea which is neither tied to a particular machine nor transforms a particular article into another state or thing?

2. Does Apostolopoulos teach caching an intermediate result from one of the stages of the multi-stage process, with the result to be cached selected according to available processing and memory resources?

PRINCIPLES OF LAW

The law in the area of patent-eligible subject matter for process claims has recently been clarified by the Supreme Court in Bilski v. Kappos, 130 S. Ct. 3218 (2010). The Court in Bilski confirmed that "[t]he Court's precedents provide three specific exceptions to § 101's broad patent-eligibility principles: 'laws of nature, physical phenomena, and abstract ideas.'" Bilski, 129 S. Ct. at 3225 (quoting Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980)).[2] As to the machine-or-transformation test, the Court held that "[t]his Court's precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101" but "[t]he machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible 'process.'" Id. at 3227. The Court further held that the term "process," as used in § 101, does not categorically exclude business methods. Id. at 3222.

> Section 103(a) forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains'.

---

[2] These three exceptions also apply to claims directed to machines and articles of manufacture.

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (Fed. Cir. 2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. Graham v. John Deere Co., 383 U.S. 1, 17-18, (Fed. Cir. 1966). See also KSR, 550 U.S. at 407, ("While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.")

ANALYSIS

§ 101 REJECTION

Appellant argues that the claimed invention is directed to patent-eligible subject matter under § 101 because the claims produce the tangible real-world result of caching an intermediate result (App. Br. 9).

Subsequent to the Examiner's Answer and Reply Brief, however, the Supreme Court held that while "[t]he machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible 'process.'" the machine-or-transformation test "is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101." Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010).

We conclude that the invention recited in independent claims 1 and 10 is not directed to patent-eligible subject matter. Claim 1 (method) and claim 10 (computer-readable medium) both recite performing the steps of receiving streaming media, determining an allocation of available processing and memory resources, performing a multi-stage service on the streaming

media, and caching an intermediate result selected according to the available resources. First, none of these steps is tied to a particular machine, and none results in the transformation of a particular article to a different state or thing. Second, although the machine-or-transformation test is not the sole test for patent eligibility, we find that the claimed invention is directed to an abstract idea. Because no physical limitations are present in the claims, there is nothing to preclude an interpretation that the method steps could be performed entirely mentally. "[C]aching an intermediate result" could amount to no more than the memorization of a number.

Therefore, we will sustain the Examiner's § 101 rejection of claims 1 and 10, as well as claims 2-9 and 11-18 dependent therefrom, as not directed to patent-eligible subject matter.[3]

Claim 19, directed to a device for servicing streaming data that comprises a processor and memory, is not a process claim and thus is not subject to the Bilski analysis. We will not sustain the § 101 rejection of claims 19-27.

§ 103 REJECTION OF CLAIMS 1-5, 9-14, AND 19-23

Independent claims 1, 10, 19 recite caching an intermediate result, said result selected according to said available processing and memory resources. The Examiner concedes that Yoo does not teach the claimed caching, but relies on Apostolopoulos as suggesting this feature (Ans. 11).

We disagree with the Examiner's finding. While we agree with the Examiner that Apostolopoulos teaches an entropy coding module that

[3] Because we sustain the § 101 rejection of claims 10-18, we need not reach the Examiner's further rejection of claims 10-18 as reciting nonfunctional descriptive material.

applies entropy coding to blocks of quantized discrete cosine transform (DCT) coefficients and an output buffer (not shown) that organizes the entropy-coded blocks into a predictively-coded block-based picture signal (col. 23, ll. 36-42), corresponding to the claim limitation of "caching an intermediate result," we do not find that Apostolopoulos teaches selecting that result "according to said available processing and memory resources," as the claims require. We agree with Appellant's argument that the output buffer of Apostolopoulos receives entropy-coding blocks regardless of available resources (Reply Br. 2).

We therefore find that the Examiner erred in rejecting claims 1-5, 9-14, and 19-23 as unpatentable under § 103. We will not sustain the Examiner's rejection.

§ 103 REJECTION OF CLAIMS 6-8, 15-18, AND 24-27

As noted supra, we do not sustain the § 103 rejection of independent claims 1, 10, and 19, from which these claims depend. We have reviewed Panusopone, and find that it does not remedy the noted deficiencies of Yoo and Apostolopoulos. Accordingly, we will not sustain the § 103 rejection of claims 6-8, 15-18, and 24-27, for the same reasons expressed supra with respect to claims 1-5, 9-14, and 19-23.

CONCLUSIONS

1. The invention recited in claims 1-18 is directed to a patent-ineligible abstract idea which is neither tied to a particular machine nor transforms a particular article into another state or thing.

2. Apostolopoulos does not teach caching an intermediate result from one of the stages of the multi-stage process, the result to be cached selected according to available processing and memory resources.

ORDER

The Examiner's rejection of claims 1-18 is affirmed. The Examiner's rejection of claims 19-27 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

gvw